[0146] If however the background (green) display element was active, then the overlapping portion could be made to appear a slightly reddish green (that is, a combination of mostly green and a little red). This could be achieved in either of the ways described above.

[0147] Alternatively or in conjunction with the above automatic adjustment of visual properties, the present invention also contemplates moving display elements laterally, within their current display layer, in order to remove overlap. Furthermore, a foreground display element in a front display layer may be moved wholly within a background display element on a rear display layer if the rear display layer has a suitably sized area of appropriately rendered space. For example, if the background display layer had an area of white space within which the foreground display layer could fit, then the present invention may move the foreground display element over the white space area.

[0148] Although in the above description reference is made to overlap of two display elements, it is of course possible that overlap occurs between more than two display elements and the present invention aims to improve the legibility or "viewability" of all overlapped portions. For example, more than one display element may be provided in a first layer, all of which overlap with different portions and/or share common overlapping portions with a further display element on a different display layer. Alternatively, more than two display layers may be provided, each of which includes a respective display element which overlaps with one or more of the other display elements, either independently or sharing some common overlapping portion or portions.

[0149] Furthermore, in some case, display elements on two or more display layers may be rendering associated display elements which are linked to effectively form a single display element. For example, an image may be displayed in "3-D" over multiple display layers so that movement of the any of the images display elements causes movement of all of the separate associated display elements on the respective layers. In this case, if overlap occurs between the "3-D" image and a further display element, then any adjustment in position or visual properties required of the "3-D" image will be carried out on each of its constituent display elements so that it is treated effectively as a single display element.

Interactive Visual Summary—User Interface

[0150] FIG. **2** illustrates a block schematic flowchart diagram of information flows and steps executed by software employed in conjunction with a further preferred embodiment of the present invention.

[0151] In initial step **3** the method executed consists of the software involved detecting a display element selection action by a user and subsequently generating at least one display element selection identifier in response. The detection of user selection actions can be completed through a receiving control component such as screen based toolbars, hot key selections or radio buttons displayed on the MLD to the user on any convenient layer of the display.

[0152] One implementation of display element selection comprises the use of a control toolbar or interface which is in the form of a graphical representation which a user is able to interact with by, for example, dragging and dropping (using a mouse or touch screen for example) onto areas representing the various display layers, icons or symbols representing various display elements on the multi-layer display system. For example, the graphical representation could be of a shelving system (such as book shelves) wherein each shelf represents a display layer onto which an icon representing a particular display element may be dropped to thereby instruct the allocation or assignment of that display element to the chosen display layer.

[0153] Another possibility would be to simply provide a miniaturised graphical representation of the various display layers and display elements thereon in two dimensions. The various overlapped display layers would however be displayed side-by-side.

[0154] In a further alternative, the user interface could be provided as a miniaturised two dimensional representation of the appearance of the display apparatus from the viewer's perspective. That is, the user interface would include symbols representative of each of the display elements shown on the various display layers although the user interface would be rendered in a single layer. In order to indicate to a user the display layer to which each display element is currently assigned, different colours could be used for each display layer. For example, all display elements on a front display layer could be coloured green while all display elements on the next display layer could be coloured red for example. Similarly, the outlines of symbols representing display elements in different layers could be visually different (for example, solid line, dashed line, dot-dash line) or a small numeral ("1", "2", "3" for example) could be positioned within each symbol in the user interface to identify its display layer.

[0155] Accordingly, the control toolbar component enables the user to select a display element and a display layer and to thereby generate a display element selection identifier and a display layer selection identifier. After a display element selection identifier has been generated for the display element selected by a user, step **4** is then carried out in which the user manipulates the selected display element. The manipulation may consist in shifting the symbol representing a particular display element to an alternative display layer. This layer selection action is detected through the user interacting with a control component, which will in turn trigger the generation of a display layer selection identifier which identifies the selected destination display layer on which the user wishes to have the selected display element presented. As previously mentioned, in some MLD systems, (such as those containing only two layers), this step may be optional. Alternatively, the manipulation may consist in making the selected display element active, altering its visual properties or changing its x,y position within its original display layer.

[0156] In the last step, step **5**, the user manipulation carried out on the symbol representative of the selected display element is transferred to the actual display element so that it is moved to a selected display layer or it is made active or it's x,y location is changed for example. This is accomplished using graphics subsystems and software ordinarily employed by the MLD to display content on each of its layers based upon the generated display element selection identifier and display layer selection identifier. In the case where the selected display element is to be transferred to a